

PCT09

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/462,972 Input Set : A:\BB-1095-A Corrected Seq List.txt

DATE: 02/14/2003 #6

TIME: 11:52:50

Output Set: N:\CRF4\02142003\I462972.raw 3 <110> APPLICANT: E. I. DUPONT DE NEMOURS AND COMPANY Odell, Joan T - 4 Allen, Stephen M 7 ₺120> TITLE OF INVENTION: PLANT SUG1 HOMOLOGS 9 <130> FILE REFERENCE: BB-1095-A 11 <140> CURRENT APPLICATION NUMBER: US 09/462,972 12 <141> CURRENT FILING DATE: 2000-01-14 14 <150> PRIOR APPLICATION NUMBER: PCT/US98/13992 15 <151> PRIOR FILING DATE: 1998-07-07 17 <150> PRIOR APPLICATION NUMBER: US 08/893,401 18 <151> PRIOR FILING DATE: 1997-07-11 20 <160> NUMBER OF SEQ ID NOS: 14 22 <170> SOFTWARE: Microsoft Office 97 24 <210> SEQ ID NO: 1 25 <211> LENGTH: 1254 26 <212> TYPE: DNA 27 <213> ORGANISM: Glycine max 29 <220> FEATURE: 30 <221> NAME/KEY: CDS 31 <222> LOCATION: (1)..(1254) 32 <223> OTHER INFORMATION: 35 atg gct ctt gta gga gtt gaa ctg aag cat gcg gcg gag ggc gta ccg 48 W--> 34 <400> 1 36 Met Ala Leu Val Gly Val Glu Leu Lys His Ala Ala Glu Gly Val Pro 39 gag gcg aat tgc tcc gcc aag ccc acc aag cag ggc gag ggc ctc cgc 96 40 Glu Ala Asn Cys Ser Ala Lys Pro Thr Lys Gln Gly Glu Gly Leu Arg 43 cac tac tat tct ctc aac atc cac gag cat cag ctc ctt ctt cgc caa 144 44 His Tyr Tyr Ser Leu Asn Ile His Glu His Gln Leu Leu Leu Arg Gln 47 aag act cat aac ctc aac cgt ctc gag gct cag aga aac gac ctc aat 192 48 Lys Thr His Asn Leu Asn Arg Leu Glu Ala Gln Arg Asn Asp Leu Asn . 45 51 tct agg gtg agg atg ctg cgc gaa gaa tta cag ctt ctg cag gaa ccc 240 52 Ser Arg Val Arg Met Leu Arg Glu Glu Leu Gln Leu Gln Glu Pro 55 ggc tct tat gtc ggt gaa gtt gtc aaa gta atg ggc aag aac aaa gtc 288 56 Gly Ser Tyr Val Gly Glu Val Val Lys Val Met Gly Lys Asn Lys Val

59 ctt gtc aag gtc cac cca gaa gga aaa tat gtt gtt gac att gac aaa

60 Leu Val Lys Val His Pro Glu Gly Lys Tyr Val Val Asp Ile Asp Lys

61

100

336

DATE: 02/14/2003 TIME: 11:52:50 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/462,972

Input Set : A:\BB-1095-A Corrected Seq List.txt Output Set: N:\CRF4\02142003\I462972.raw

Output Set: N:\CRF4\02142003\1462972.12"	0.4
Output Set: N: (ORE 1) Output Set: N: (ORE 1) Output Set: N: (ORE 1) 3 3 63 aat att gac att aca aag att act cca tcc act aga gtt gca ctc cgc 63 aat att gac att aca aag att act cca tcc act aga gtt gca ctc cgc 125 125 126 127 128 129 120 120 120 120 120 120 120	84
63 aat att gac att aca aag att act cca tcc act aga gtt gca cto s 64 Asn Ile Asp Ile Thr Lys Ile Thr Pro Ser Thr Arg Val Ala Leu Arg 125 120 120 125 127 128 129 120 120 120 120 120 121 122 123 124 125 126 127 128 129 120 120 120 120 121 122 123 124 125 126 127 128 128 129 129 129 129 129 129 129 129	
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68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 68 Asn Asp Ser Tyr Val Leu HIS Hed 140 69 130 71 ttg gtc aat ctg atg aaa gtt gag aaa gtt ccc gat tct aca tat gac 160 71 ttg gtc aat ctg atg aaa gtt gag aaa gtt Pro Asp Ser Thr Tyr Asp 160 72 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 150 73 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 150 74 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 160 75 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 160 76 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 160 77 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 160 78 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 160 79 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 160 79 Leu Val Asn Leu Met Lys Val Fro Asp 160 70 Leu Val Asn Leu Met Lys Val Fro Asp 160 70 Leu Val Asn Leu Met Lys Val Fro Asp 160 70 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Val Fro Asp 160 71 Leu Val Asn Leu Met Lys Va	
at ctg atg aaa gtt gay Lys Val Pro Asp Ser Thi 191 160	
71 ttg ged Asn Leu Met Lys Val Glu Lys 155	528
72 Let Val 150 150 150 and att aaa gaa ata aaa gay yee 1 11e	
72 Leu Val Asn Leu Met Lys Val Gla 155 72 Leu Val Asn Leu Met Lys Val Gla 155 73 145 73 145 75 atg att ggt ggt tta gac cag caa att aaa gaa ata aaa gag gtc att 75 atg att ggt ggt tta gac cag caa att aaa gaa ata aaa gag gtc att 75 atg att ggt ggt tta gac cag caa att aaa gaa ata aaa gag gtc att 76 atg att ggt ggt tta gac cag caa att aaa gaa ata aaa gag gtc att 77 atg att gga	
73 145 75 atg att ggt ggt tta gac cag caa att aaa gaa ata aaa gag ggt 73 145 75 atg att ggt ggt tta gac cag caa att aaa gaa ata aaa gag ggt 73 145 75 atg att ggt ggt tta gac cag caa att aaa gaa ata aaa gag ggt 75 atg att ggt ggt tta gac att gga att gca 165 170 170 165 170 170 170 170 170 170 170 170 170 170	576
75 atg dto 37 Leu Asp GIN GIN 170 76 Met Ile Gly Gly Leu Asp GIN GIN 170 77 78 gag cta cca atc aaa cat cct gag ctg ttt gaa agt ctt gga att gca 79 gag cta cca atc aaa cat cct gag ctg ttt gaa agt ctt gga att gca 79 gag cta cca atc aaa cat cct gag ctg ttt gaa agt ctt gga att gca 79 gag cta cca atc aaa cat cct gag ctg ttt gaa agt ctt gga att gca 79 gag cta cca atc aaa cat cct gag ctg ttt gaa agt ctt gga att gca 79 gag cta cca atc aaa cat cct gag ctg ttt gaa agt ctt gga att gca	
76 Met 110 317 165 77 165 165 165 165 177 165 179 gag cta cca atc aaa cat cct gag ctg ttt gaa agt ctt gga atc 317 179 gag cta cca atc aaa cat cct gag ctg ttt gaa agt ctt gga atc 317 190 190 185 180 180 180 180 180 180 180 180 180 180	
79 gag Cta Coo Pro Ile Lys His Pro Glu Eca 2 190	624
80 Glu Led 110 180 180 Lat ggg cca cct ggt aca ggt ada dou	
80 Glu Leu Pro Ile Lys His Pro 185 80 Glu Leu Pro Ile Lys His Pro 185 81 180 81 205 83 caa cca aag ggt gtc ctg ctc tat ggg cca cct ggt aca ggt aaa aca 83 caa cca aag ggt gtc ctg ctc tat ggg cca cct ggt aca ggt aaa aca 84 205 85 caa cca aag ggt gtc ctg ctc tat ggg cca cct ggt aca ggt aaa aca 86 205 87 205 88 205 89 205 80 Glu Leu Pro Ile Lys His Pro 185 80 Glu Leu Pro Ile Lys His Pro 185 80 Glu Leu Pro Ile Lys His Pro 185 81 205 82 205	
80 Glu Bol 180 81 180 82 ca cca aag ggt gtc ctg ctc tat ggg cca cct ggt aca ggt dds 83 caa cca aag ggt gtc ctg ctc tat ggg cca cct ggt aca ggt Thr Gly Lys Thr 83 caa cca aag ggt gtc ctg ctc tat ggg cca cct ggt aca gg 205 84 Gln Pro Lys Gly Val Leu Leu Tyr Gly Pro Pro Gly Thr Gly Lys Thr 85 cat act gac tgt aca ttc atc agg	672
84 Gln Pro Lys Gly Val Leu Leu 192 205 84 Gln Pro Lys Gly Val Leu Leu 192 200 85 200 85 195 200 87 ttg ttg gct agg gca gtg gct cat cat act gac tgt aca ttc atc agg 87 ttg ttg gct agg gca gtg gct cat cat act gac tgt aca ttc atc agg 87 ttg ttg gct agg gca gtg gct cat cat act gac tgt aca ttc atc agg 87 ttg ttg gct agg gca gtg gct cat cat act gac tgt aca ttc atc agg	
85 the age age gea gtg get cat this Thr Asp Cys Thr Phe 116 119	
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88 Leu lieu 1215	
87 Ltg teg Ala Arg Ala Val Ala III 220 88 Leu Leu Ala Arg Ala Val Ala III 220 89 210 91 gtg tct ggt tct gag tta gtt cag aaa tac att gga gaa ggt tct aga 91 gtg tct ggt tct gag tta gtt cag aaa tac att gga gaa ggt tct aga 92 Val Ser Gly Ser Glu Leu Val Gln Lys Tyr Ile Gly Glu Gly Ser Arg 240 92 Val Ser Gly Ser Glu Leu Val Gln Lys Tyr Ile Gly Glu Gly Ser Arg 230 230 230 230 220 220 231 240 250 260 270 280 280 280 280 280 280 280 280 280 28	
gr gry cor Gly Ser Glu Leu Val Gli By 235	768
92 Val Ser Gly Ser Glu Leu Val Gin 27 235 92 Val Ser Gly Ser Glu Leu Val Gin 27 235 93 225 95 atg gtc agg gaa ctt ttt gtt atg gcc agg gaa cat gct cca tca att 95 atg gtc agg gaa ctt ttt gtt atg gcc agg gaa cat gct cca tca att 255 250 250 250 250 250 250 250 250 250	
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100 lie file 260 101 260 103 gga agt ggc aac ggt gat agt gag gta cag cgt act atg ctg gdd belling 260 103 gga agt ggc aac ggt gat agt gag gta cag cgt act atg ctg gdd belling 260 280 280 280 280 280 280 280	
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105 275 the gaa got to aaat aag ato Lys Val Leu	
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108 Leu Asn Gln Leu Asp Gly Phe Gld 300 108 Leu Asn Gln Leu Asp Gly Phe Gld 300 295 109 290 111 atg gcc acc aat cgg att gat atc ctg gat caa gcc ctc ctt aga cca 112 Met Ala Thr Asn Arg Ile Asp Ile Leu Asp Gln Ala Leu Leu Arg Pro 320 310 310 310 310 310 310 310	
111 atg gcc acc aat cgg att gas Ile Leu Asp Gln Ala neu 320	1000
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112 Met Ard 133 310 113 305 115 gga cgg ata gac cgg aaa att gaa ttt cca acc cct aat gad gdg cord ard gad gag att gaa ttt cca acc cct aat gad gdg cord gag att gaa att gaa ttt cca acc cct aat gad gdg cord gag att gag acc gag att gag acc gag att gag gag att gag acc gag a	
115 gga cgg ata gac cgg ada to Glu Phe Pro Thr Pro Non 335	1056
116 Gly Arg Ile Asp Arg Lys 110 330	1056
325 atc cat tot aga aga atg date Met Arg	
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	1104
121 340 and add att gcc gag aag atg aac ggg sha Ser Gly	•
120 Arg Leu Asp Ile Leu Lys Ile M345 120 Arg Leu Asp Ile Leu Lys Ile M345 121 123 ggc att gat ttg aag aag att gcc gag aag atg aat gga gca tct ggt 123 ggc att gat ttg aag aag att gcc gag aag atg aat gga gca tct ggt 123 ggc att gat ttg aag aag att gcc gag aag atg aat gga gca tct ggt 124 Asp Leu Lys Lys Ile Ala Glu Lys Met Asn Gly Ala Ser Gly 125 Gly Ile Asp Leu Lys Lys Ile Ala Glu Lys Met Asn Gly Ala Ser Gly	4150
120 Arg 120 340 121 123 ggc att gat ttg aag aag att gcc gag aag atg aat gga gca tot 35 124 Gly Ile Asp Leu Lys Lys Ile Ala Glu Lys Met Asn Gly Ala Ser Gly 365 124 Gly Ile Asp Leu Lys Lys Ile Ala Glu Lys Met Asn Gly Ala Ser Gly 365 360 365 367 368 369 360 360 360 360 365	1152
125 355	
123 ggs I Asp Leu Lys Lys 11e Asp 124 Gly Ile Asp Leu Lys Lys 11e Asp 125 360 125 355 127 gct gaa ctt aag gct gtt tgc act gaa gct gga atg ttt gct ttg agg	

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Output Set: N:\CRF4\02142003\1462972.12"	
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128 Ala Glu Leu Lys Ala val Gys 375 129 370 131 gag cgg agg gta cac gtg act cag gag gat ttt gag atg gcc gtg gcg 131 gag cgg agg gta cac gtg act cag gag gat ttt gag atg gcc gtg gcg 131 gag cgg agg gta cac gtg act cag gag gat ttt gag atg gcc gtg gcg 131 gag Arg Val His Val Thr Gln Glu Asp Phe Glu Met Ala Val Atg	1200
129 370 129 370 131 gag cgg agg gta cac gtg act cag gag gat ttt gag atg gcc geg 131 gag cgg agg gta cac gtg act cag gag gat ttt gag atg gcc geg 131 gag cgg agg gta cac gtg act cag gag gat ttt gag atg gcc geg 132 Glu Arg Arg Val His Val Thr Gln Glu Asp Phe Glu Met Ala Val Ala 132 Glu Arg Arg Val His Val Thr Gln Glu Asp Phe Glu Met Ala Val Ala 132 Glu Arg Arg Val His Val Thr Gln Glu Asp Phe Glu Met Ala Val Ala 132 Glu Arg Arg Val His Val Thr Gln Glu Asp Phe Glu Met Ala Val Ala 133 gag cgg agg gta ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act cag gag gat ttt gag atg gcc geg act gag gat gag gat gag gat gag gat gag gat gag gat gag gag	
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135 aag gtg atg aaa aag gus Thr Glu Lys Asn Met Ser Hou 415	105/
133 385 135 aag gtg atg aaa aag gag act gaa aaa aac atg tca ttg cgg day 136 Lys Val Met Lys Lys Glu Thr Glu Lys Asn Met Ser Leu Arg Lys Leu 415 405	1254
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151 Met Ala Leu Val Gly Val Glu Hos 10 152 1 155 Glu Ala Asn Cys Ser Ala Lys Pro Thr Lys Gln Gly Glu Gly Leu Arg 156 20 156 20 156 45 159 His Tyr Tyr Ser Leu Asn Ile His Glu His Gln Leu Leu Leu Arg Gln 159 Glu Ala Gln Arg Asn Asp Leu Asn	
156 The HIS GIU HIS OF AE	
159 His Tyl Tyl Sou 40 Ala Gln Arg Asn Asp Leu Asn	
159 His Tyr Tyr Ser Leu Ash 116 40 160 35 163 Lys Thr His Ash Leu Ash Arg Leu Glu Ala Gln Arg Ash Asp Leu Ash 160 55 163 Lys Thr His Ash Leu Ash Arg Leu Gln Leu Gln Glu Pro	
163 Lys Inc has 55	
163 Lys Thr His Asn Leu Asn Arg Leu 60 163 Lys Thr His Asn Leu Asn Arg Leu 60 164 50 167 Ser Arg Val Arg Met Leu Arg Glu Glu Leu Gln Leu Leu Gln Glu Pro 80 167 Ser Arg Val Arg Met Leu Arg Met Gly Lys Asn Lys Val	
167 Ser Arg Val Arg Met Leu Arg Glu 75 70 70 168 65 171 Gly Ser Tyr Val Gly Glu Val Val Lys Val Met Gly Lys Asn Lys Val 90 85 85 86 87 87 88 78 88 79 88 70 88 88 70 88 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 88 70 88 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 88 70 88 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 70 88 88 70 88	
168 65 95 95 171 Cly Ser Tyr Val Gly Glu Val Val Lys Val Met Gly 271 95 171 Asp Lys	
85 Clu Cly Lys Tyr Val Val Asp 11e Asp 110	
171 Gly Ser Tyr Val Gly Glu Val Val 90 171 Gly Ser Tyr Val Gly Glu Gly Lys Tyr Val Val Asp Ile Asp Lys 172 175 Leu Val Lys Val His Pro Glu Gly Lys Tyr Val Val Asp Ile Asp Lys 100 105 107 108 109 109 109 109 109 109 109 109 109 109	
176 The The The Pio Don 126	
179 Asn Ile Asp Ile Thr Lys 120 180 183 Asn Asp Ser Tyr Val Leu His Leu Val Leu Pro Ser Lys Val Asp Pro 185 186 127 187 Asp Ser Tyr Val Leu His Leu Val Pro Asp Ser Thr Tyr Asp	
190 - Lis Lell Val How -	
183 Asn Asp Ser Tyr Val Leu H13 20 140 183 Asn Asp Ser Tyr Val Leu H13 20 140 184 130 135 184 130 155 187 Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr Asp 160 187 Leu Val Asn Leu Met Lys Val Glu Lys Glu Ile Lys Glu Val Ile	
19A 13U	
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188 145 and Clar Glar 11e 193 clar	
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200 Ala Arg Ala Val Ala His His His 220	ď
203 Leu Led Alla 215 215 215 Tyr Ile Gly Glu Gly Ser Al	0
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207 Val Ser 112 230 230 Arg Glu His Ala Pro Ser 113	. •
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245 Ser The Gly Ser Ala Arg Met Glu St	
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001 /70 -3 700 118 118 118 118 118	
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287 Val His Pro Glu Gly Lys Tyl Val 75 287 Val His Pro Glu Gly Lys Tyl Val 75 288 65 290 atc act aag atc aca cct tca aca aga gtt gct ctt cgg aat gac agc 290 290 atc act aag atc aca cct tra aca aga gtt gat Leu Arg Asn Asp Ser 90 291 Ile Thr Lys Ile Thr Pro Ser Thr Arg Val Ala Leu Arg Asn Asp 95 291 Ile Thr Lys Ile Thr Pro Ser Thr Arg Val Asn 90	225
201 110 1111 212	335
292 80 at ctg atc cta cca agc aaa gtt yat ood Val Asn	
294 tat atg ctc cat ctg atc Pro Ser Lys val Asp 223 110	
291 110 185 292 80 292 80 294 tat atg ctc cat ctg atc cta cca agc aaa gtt gat cca ttg ys 294 294 tat atg ctc cat ctg atc cta cca agc aaa gtt gat cca ttg ys 295 295 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asn 295 295 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asn 295 296 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asn 296 297 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asn 297 298 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asn 299 299 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asn 299 290 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asn 299 290 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asn 290 290 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asp Pro Leu Val Asp 290 290 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp Pro Leu Val Asp 290 290 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp 200 290 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp 200 290 Tyr Met Leu His Leu Ile Leu Pro Ser Lys Val Asp 200 290 Tyr Met Leu His Leu His Leu Pro Ser Lys Val Asp 200 290 Tyr Met Leu His Leu His Leu Pro Ser Lys Val Asp 200 290 Tyr Met Leu His Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu His Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Val Asp 200 200 Tyr Met Leu Pro Ser Lys Va	
296	

DATE: 02/14/2003 TIME: 11:52:50 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/462,972

Input Set : A:\BB-1095-A Corrected Seq List.txt Output Set: N:\CRF4\02142003\1462972.raw

Output Set: N:\CRF4\02142000	383
298 ctc atg aaa gtt gag aag gtt ccg gat tct acc tat gat atg gga 298 ctc atg aaa gtt gag aag gtt ccg gat tct acc tat gat atg gga 298 ctc atg aaa gtt gag aag gtt gag gag	303
299 Leu Met Lys van 120	431
303 Gly Leu Asp offi 135	479
304 130 306 atc aaa cat ccg gaa ctg ttt gag agc ctt gga att gcg cad or Lys 307 Ile Lys His Pro Glu Leu Phe Glu Ser Leu Gly Ile Ala Gln Pro Lys 307 Ile Lys His Pro Glu Leu Phe Glu Ser Leu Gly Ile Ala Gln Pro Lys 155 308 145 150 310 ggt gtc ctt ctt tat gga cct ccg ggc aca gga aag aca ttg ttg gca 310 ggt gtc ctt ctt tat gga cct ccg ggc aca gga aag aca ttg ttg gca 311 Gly Val Leu Leu Tyr Gly Pro Pro Gly Thr Gly Lys Thr Leu Leu Ala 311 Gly Val Leu Leu Tyr Gly Pro Pro Gly Thr Gly Lys Thr Leu Leu Ala 316 Sly Val Leu Leu Tyr Gly Pro Pro Gly Thr Gly Lys Thr Leu Leu Ala 317 Sly Val Leu Leu Tyr Gly Pro Pro Gly Thr Gly Lys Thr Leu Leu Ala	527
311 Gly Val Leu Leu Tyr Gly Pro Flo S27 312 160 314 cgt gcg gtt gct cat cac act gac tgc acc ttc atc agg gtg tct ggt 315 Arg Ala Val Ala His His Thr Asp Cys Thr Phe Ile Arg Val Ser Gly 316 180 187 188 188 188 189 180	575
315 Arg Ala val Mag 180 180 316 318 tct gag ttg gtt cag aag tat att ggt gag ggc tcc cgg atg gtt agg 318 tct gag ttg gtt cag aag tat att ggt gag ggc tcc cgg atg gtt agg 318 tct gag ttg gtt cag aag tat att ggt gag ggc tcc cgg atg gtt agg 318 tct gag ttg gtt cag aag tat att ggt gag ggc tcc cgg atg gtt agg	623
319 Ser Glu Led Value 200 320 195 320 agg gaa cat gca cca tcc att ata ttt atg 322 gaa ctc ttt gtt atg gcc agg gaa cat gca cca tcc att ata ttt atg	671
323 Glu Leu Fhe var 215 324 210 326 gat gaa att gac tct atc gga tct gct aga atg gag tct gga act ggc 326 gat gaa att gac tct atc gga tct gct aga atg gag tct gga act ggc	719
327 Asp Glu Ile Asp Sel Ile 230 328 225 230 330 aac ggt gac agt gaa gtt cag cgt act atg ctt gaa ctt cta aac cag 330 aac ggt gac agt gaa gtt cag cgt act atg ctt gaa ctt cta aac cag 331 Asp Gly Asp Ser Glu Val Gln Arg Thr Met Leu Glu Leu Leu Asp Gln 255 250 255 245 245 256 257	767
331 Asn Gly Asp Ser Glu var 250 332 240 334 ctc gat ggt ttt gaa gca tca aac aaa att aag gtt ttg atg gca acg 334 ctc gat ggt ttt gaa gca tca aac aaa att aag gtt ttg atg gca acg 335 Leu Asp Gly Phe Glu Ala Ser Asn Lys Ile Lys Val Leu Met Ala Thr 270 265 265	815
335 Leu Asp Gly Phe Glu Ala Scr 1265 260 260 260 265 265 267 336 338 aac aga ata gac att ttg gat caa gcc ctt ctg agg cct ggc cgc ata 338 aac aga ata gac att ttg gat caa gcc ctt ctg agg cct ggc cgc ata 265 280 285 286 287	863
339 Asn Arg Ile Asp Ile Leu Asp 3280 340 275 340 280 342 gac agg aag att gaa ttt cca aat cct aac gag gat tca cgt ttc gat 342 gac agg aag att gaa ttt cca aat cct aac gag gat tca cgt ttc gat 343 Asp Arg Lys Ile Glu Phe Pro Asn Pro Asn Glu Asp Ser Arg Phe Asp 300 295	911
343 Asp Arg Lys Ile Glu Fle 12 300 344 290 346 atc ttg aag atc cat tca aga aaa atg aac ttg atg cgt ggc att gat 346 atc ttg aag atc cat tca aga aaa atg aac ttg atg cgt ggc att gat 347 Ile Leu Lys Ile His Ser Arg Lys Met Asn Leu Met Arg Gly Ile Asp 315 310	959
347 Ile Leu Lys Ile His Sel Arg 1 315 348 305 310 348 305 ctg aaa aag atc gcg gaa aag atg aat ggg gcc tca gga gct gag ctc 350 ctg aaa aag atc gcg gaa aag atg atg at ggg gcc tca gga gct gag ctc 350 ctg aaa aag atc gcg gaa aag atg atg Ala Ser Gly Ala Glu Leu 330 335 325 325 444 gct ctt cgt gag aga agg	1007
351 Leu Lys Lys Ile Ala Glu Lys 330 325 352 320 354 aag gcc gtc tgc aca gag gct gga atg ttt gct ctt cgt gag aga agg 354 aag gcc gtc tgc aca gag gct gga atg ttt gct ctt cgt gag aga agg 355 Lys Ala Val Cys Thr Glu Ala Gly Met Phe Ala Leu Arg Glu Arg Arg 350 340 340	1055
355 Lys Ala Val Cys Thr Glu Ala Cly 345 346 356 358 gtg cac gtt acc cag gag gac ttc gag atg gca gtg gcc aag gtg atg 358 yal His Val Thr Glu Asp Phe Glu Met Ala Val Ala Lys Val Met 359 Val His Val Thr Glu Asp Phe Glu Met Ala Val Ala Lys Val Met 365	1103
359 Val His Val Thr Gln Glu Asp Flo 325 360 360 355 362 aag aaa gac acg gag aag aac atg too otg ogo aag oto tgg aag	1148

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/462,972 DATE: 02/14/2003 TIME: 11:52:51

Input Set : A:\BB-1095-A Corrected Seq List.txt

Output Set: N:\CRF4\02142003\I462972.raw

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:11; N Pos. 262,271,293,331,355,356,373,384,387,391,398,405,407,418,425

Seq#:11; N Pos. 427,428,453,454,473,497,518,526,527,541

Seq#:13; N Pos. 149,206,217,299,325,354,412,478,493,498,521,558,571,584,585

Seq#:14; Xaa Pos. 20,47,66,70,97,101,106,115,116

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/462,972

DATE: 02/14/2003 TIME: 11:52:51

Input Set : A:\BB-1095-A Corrected Seq List.txt

Output Set: N:\CRF4\02142003\I462972.raw

L:34 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:32 L:269 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3,Line#:267 L:1222 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:240 M:341 Repeated in SeqNo=11 L:1283 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:64 M:341 Repeated in SeqNo=12 L:1393 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:120 L:1469 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:16 M:341 Repeated in SeqNo=14